
CLAIMS

I Claim:

1. Be it known that Edwin "M" Hayes, a citizen of the United States and residing in Chandler, Arizona has adapted the original concepts and designs of Nikola Tesla, (Fluid Propulsion Pat. # 1,061,142, May 6, 1913, and Turbine Pat. # 1,061,206, May 6 1913) along with new and useful improvements directed toward the Vacuum applications for the Semiconductor, Aerospace, Automotive, Food Preparation, and Health and Pharmaceutical Industries. The following is a full, clear and exact description of the design, concept, and improvements directed toward said marketplaces/industries.

What is in fact being patented is the adaptation of Tesla's original design along with new and improved designs and material improvements for the above mentioned applications.

In the practical application of mechanical power, in this case vacuum power, (based on the use of fluid [and or gasses] as the vehicle of energy). In order to attain the highest economy of energy, the changes in the velocity and direction of movement of the fluid should be as gradual as possible. In existing forms where high vacuum equipment in use today industries, more or less sudden changes, shocks and vibrations are unavoidable. During the operation of fluid energy, the devices used to derive or impart energy (such as pistons, paddles, vanes and blades)

introduce significant amounts of defects and limitations and tends to complicate the cost of production and maintenance of these existing machines.

The object of this invention is to overcome these deficiencies and to effect the transmission and transformation of mechanical energy through the agency of fluids in a more perfect manner and by means simpler and more economical than those previously used. This is accomplished by causing the propelling fluid to move in natural paths or stream lines of least resistance, free from the constraints of existing devices to the extent that there is a seemingly insignificant change in the velocity and direction of fluid movement thereby avoiding the losses due to sudden variations while the fluid is imparting energy.

It is common knowledge that among other things, a fluid possesses both adhesion and viscosity. A solid body moving through a fluid encounters what is known as "lateral" or "skin resistance," which is two fold. One type of resistance comes from the shock of the fluid against the aspirates of the solid substance, and the other comes from internal forces opposing molecular separation. As a consequence of these principles, a certain amount of fluid is dragged along by the moving body. Conversely, if a solid body is placed in a fluid in motion, for the same reason, it is propelled in the direction of the fluid's movement. While these effects may be routine in some industries, I am the first to apply them in a practical and economic manner in these industries for the propulsion of fluids.

This invention applies to the art of imparting energy to fluids (and gasses), and the following is a detailed description of the nature and principles surrounding this device together with a drawing which illustrates an operative and efficient embodiment of the same.